August—September 1973

EMO

New Brunswick Flood—1973

Emergency Communications

Civil Emergency Planning Resume

The Public Relations Disaster

CANADA EMERGENCY MEASURES ORGANIZATION

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The EMO NATIONAL DIGEST publishes six editions annually to provide current information on a broad range of subjects dealing with civil emergency planning. The magazine is published in English and French and may be obtained by writing to the Canada Emergency Measures Organization, Ottawa, Ont. K1A 0W6.

In addition to publishing articles which reflect Canadian Government policy the Digest may also publish articles by private individuals on subjects of current interest to the emergency measures programme. The views of these contributors are not necessarily subscribed to by the Federal Government.

Editor: A. M. STERTON

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NEW BRUNSWICK FLOOD – 1973

by
J. David MacDonald
Supervisor Publications
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"The following announcement . . . is directed to those persons living in the lower St. John River valley . . . Due to heavy rain the river is expected to reach record heights . . . Persons living in low-lying areas below the Mactaquac power dam should take . . . action to protect themselves and their personal property . . . Arrangements for persons who have to evacuate their homes are being made . . . Emergency Measures Organization officials stress that there is no need for panic." (Broadcast)

It was about midnight on Saturday April 28, with the river already risen to 20.2 feet above sea level (some 15 feet above normal summer levels) as the result of torrential rains when this radio bulletin was issued to a tense community.

It signalled the beginning of a flood which was to see the Saint John river rise to 28.3 feet above sea level, inundate some 120 square miles of residential and farm lands, cause an estimated $11 million damage and drive hundreds of persons from their homes.

It would be the most extensive flooding ever recorded in New Brunswick, involving not only the St. John River but the Restigouche, the St. Croix and Miramichi rivers as well.

It would affect people and property from one end of the province to the other.

The rains, which had been predicted for the area over a 72-hour period, commenced early Saturday when the St. John river was already approaching spring flood stage. But instead of a three-day drizzle, the river valley experienced a downpour of up to four inches within 24-hour period.

This torrent occurred when two storm systems—one had been holding stationary in southern Maine and New England and the other from upper New York State—linked up and moved down the river, melting as they came the considerable amounts of snow remaining in the basin.

By late Sunday, the swollen river was coursing through the Mactaquac power dam just above Fredericton at a rate of 370,000 cubic feet a second, equal to 2,220,000 gallons every second.

The last time the flow had approached this figure was in May 1923 when 295,000 cubic feet a second was reported.

It was the second time this year that the St. John River had crested. The first occurred on April 25 when flows reached 230,000 cubic feet a second—a fairly common seasonal occurrence that did little damage to low-lying areas.

Government officials said the record-setting flow was of a magnitude that is likely to occur just one in 500 years, though they pointed out that laws of probability did not preclude its occurring again at any time.

"Latest reports indicate that the Trans-Canada Highway in the vicinity of the Burton Bridge has been closed to traffic. In addition, low-lying areas in the Lincoln area and in the city of Fredericton are experiencing flooding conditions. EMO officials have established communications networks with officials and private organizations."

When the possibility of serious flooding became evident the New Brunswick Emergency Measures Organization (EMO) began preparations to cope with what promised to be a crisis of awesome proportions.

First consideration was the provision of emergency telephone facilities in the emergency operations centre to handle all incoming calls. This communications centre was manned and operated by the RCMP, the RCMP Auxiliary, the Fredericton City Police and volunteers.

Next in order of importance was coordination of radio and television communication with the public and establishment of relocation and accommodation centres for persons who would be forced to evacuate their homes.

With the cooperation of the Fredericton Ministerial Association and the Salvation Army, accommodation for 1,050 persons were located along with facilities for feeding and health and welfare services.

"Motorists are advised not to travel unless absolutely necessary. Highway travel along the Trans-Canada Highway on both sides of the Burton Bridge has been cut off due to rising water. Route Eight from Fredericton to Newcastle along the Nashwaak River has been cut in several locations. In addition, a number of low-lying streets in Fredericton are now under water."

An emergency operations centre was opened and staffed by members of city and federal police, the Department of National Defence, the Saint John Ambulance Brigade, the Canadian Red Cross, the Ham Radio Association and a group of citizens' band radio operators.

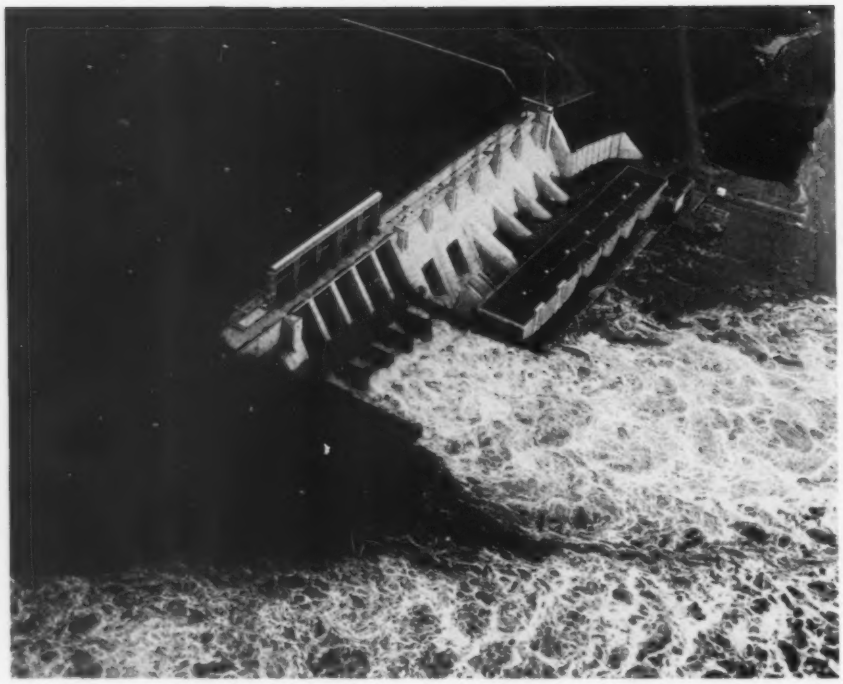
Senior officials of both the federal and provincial governments were briefed on the situation, informed of the roles they would be asked to undertake and asked to provide 24-hour liaison with the emergency operations center. Departments involved included Health and Welfare, Agriculture, Natural Resources and Highways.

EMO Flood Control Operational Centre, from left to right: Maj. W. A. Emery, NB PWC Senior Warning Officer, Mr. J. B. Pelletier, Canada EMO RD (NB), Mr. J. A. Murray, Deputy Director, NB EMO, Capt. P. Nichita, SO3 Int. HQ Combat Training Centre, CFB Gagetown, Mr. J. Langton, Planning Officer, NB EMO.

Members of the RCMP and other volunteers manning phones at the Emergency Measures Organization Headquarters, Fredericton, N.B.

Fredericton Research Station, Canada Department of Agriculture. Inspection and attention to herd health following St. John River Flood 1973.

Willow Park Trailer Site, Lincoln, N.B. swamped by the flooding of the St. John River —87 families evacuated their homes.



Mactaquac Dam is allowing the St. John River to run naturally —the 10 gates are open. The River experienced the greatest flow since records began to be kept in 1918. The flow is at least 50,000 cu. ft. per second —higher than anything in the records.

Rescue operation—Armed Forces personnel from Canadian Forces Base Gagetown and a civilian volunteer are seen in the midst of rescuing cattle from the flooded farmlands in the Maugerville-Sheffield area.

Evacuation in progress—a resident of Willow Park Trailer Site, Lincoln, N.B. moving some of his trailer that he was forced to evacuate because of the record flood condition in the area.

Aerial view of Barker's Point which was hard hit by rising waters of the St. John River. Some families in this area had to evacuate their homes.

Garden Creek, N.B.
Flood water rushes over the highway at Garden Creek turning the area into a small Niagara Falls.

Five major buildings in downtown Fredericton hard hit by flood are shown in this aerial photo—Beaverbrook Art Gallery, Legislative Building, Centennial Building, the Playhouse and the Lord Beaverbrook Hotel.

Each activity was assigned an operational room and each liaison officer was given complete authority in his special sphere of operations within the guidelines laid down by EMO officials.

As early as midnight Saturday, a fully operational centre was established and a plan evolved for evacuation of residents of the areas soon to be under water.

The entire operation was under the direction of Henry Irwin of the Department of Municipal Affairs who is director of EMO in New Brunswick.

"The coordinator of EMO activities for New Brunswick has issued an appeal for assistance from members of the public who have power boats available to assist in rescue operations. They are required in such places as Maugerville and Sheffield, Burtts Corner and the Taymouth and Durham Bridge areas. Anyone with a reliable boat willing to assist in rescue operations during the present emergency is asked to contact EMO headquarters."

Because it was recognized that the river would be extremely hazardous for boats during the night, a decision was made to wait for daylight before putting evacuation procedures into motion. It was felt that night operations would endanger the lives of both evacuees and boat operators, as well as increase the risks involved in moving livestock.

"Officials of the Emergency Measures Organization request volunteer assistance for provision of land vehicles to be used to transport persons who have been displaced from their homes due to current flood conditions . . . The raised areas now used to elevate cattle are likely to be inadequate as waters continue to rise. All possible arrangements should be made to remove cattle to higher ground as soon as possible. Scows will be operating from the Burton bridge for cattle movement . . ."

At first light Sunday and continuing through the next two days, emergency personnel evacuated over 600 persons by boat.

At one point Premier Hatfield touring the flood area in a rescue boat spotted four persons atop a porch roof and, wanting to establish some rapport with the hapless citizens, asked: "When did you first realize you were in trouble?" A voice from the bedraggled group replied: "Mister, the day I was born!"

Some 1,800 head of livestock were moved to high ground by motorized scow, tug and truck. Many of the animals were taken to the Department of Agriculture research station at Fredericton to be tended, fed and milked. Overheard on a CB receiver: "Say you guys, where the hell is that scow. I've got a cow in heat and an angry bull on top of a manure pile!"

Total reported loss of livestock: five head of cattle and three pigs.

"Persons who have voluntarily evacuated their homes without the assistance of EMO and who may be staying with friends or relatives are asked to please contact the EMO headquarters. Inquiries are being received from a number of relatives as to the whereabouts of some persons who have left their homes. It is imperative that relief and rescue officials be made aware of your location . . ."

Total reported loss of life: none.

At the height of activities commencing on Sunday, April 29, and running through Wednesday, May 2, over 1,000 persons were involved in evacuation operations, in maintaining communications, in receiving and accommodating families and livestock and in the emergency operations centre.

As the waters began to recede, the toll of property damage began to mount. Heavy deposits of silt and debris in and about homes and farms, along with discharges of furnace and fuel oil and electrical disruptions and the complete write off of over 100 mobile homes prevented an early return to normal for many. Some persons were occupying temporary accommodations up to a month later.

Almost immediately the extent of the damage became apparent, the provincial government established a flood compensation office to process damage claims. Financed jointly by the province and the federal government, the compensation office enlisted the help of professional adjusters and apprisers to investigate all claims. Within days after the first claims were received cheques were being mailed to flood victims. Though the tally is not yet complete, it is estimated that compensation paid will amount to some $10 million dollars.

"The Salvation Army announced today that the Red Sheild Appeal which began May 1 has been suspended in the Fredericton area until September. This is due to the Army's heavy involvement in the flood relief operation in the capital city area . . ."

Commenting on the effects of the flooding, EMO coordinator Henry Irwin notes that flood emergencies with far less devastating effects have occurred in New Brunswick and elsewhere in which loss of life and serious injury occurred.

"If there is any yardstick for measuring the success of this recent operation, I am convinced that the fact no lives were lost represents a success story for the hundreds of persons involved in the operation."

"I am satisfied that everyone who was part of this tremendous undertaking derived full personal satisfaction from the knowledge that their contribution was an important one."

The operation succeeded in its main objectives: the establishment of public order and confidence which had they not been present might otherwise have resulted in panic and heavy losses and the rendering of assistance to the victims of the flood in the most effective manner. ▲

EMERGENCY COMMUNICATIONS

Extracts from a Working Group Report Issued by Canada Emergency Measures Organization

Compiled and Edited by
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Emergency Preparedness Division, Department of Supply and Services

Foreword

There are approximately 13,000 licensed amateur radio operators in Canada.

The minimum qualification required for an Amateur Certificate is a knowledge of radio theory, operation of equipment, and Morse code at 10 wpm. Seventy percent of these amateurs are qualified in a higher grade of radio technology and have a Morse proficiency of 15 wpm or more.

The communications capability extends from a few miles for mobile very high frequency (VHF) equipment to world-wide coverage with high frequency (HF) equipment, varying from a few dollars for homemade equipment or adapted surplus commercial equipment to commercially-sold amateur equipment costing many hundreds of dollars.

A 1968 survey revealed that 40% of Ontario amateurs had commercially-made equipment valued at $1,000 or more. Applying this to the whole number of licensed amateurs, it means that there is at least a $5.2 million communications system of a commercial quality available for emergency use.

The amateurs are located in many diverse locations from coast-to-coast where there are no other communications facilities.

This versatile communication resource should not be overlooked when a back-up to official emergency communications is being considered. As yet, there is no formal, official, national recognition of the capability of communication of the Amateur Experimental Service in Canada.

With the co-operation of interested federal departments, Canada EMO and Canadian amateur organizations, this valuable resource of communications equipment, operating personnel and expertise could be developed into a "Canadian Amateur Radio Emergency Service" on a national basis to serve in times of crisis as it is needed.

Introduction

In February 1973, the Canada Emergency Measures Organization convened an Emergency Communications Planning Officers' Conference at the Canada EMO College at Arnprior and one of the topics concerned the role of the Amateur Experimental Service in emergencies. Time did not permit discussion of a number of questions which arose and Canada EMO, asked that a working group be convened to discuss these questions and arrive at conclusions which could, if it was deemed advisable, lead to recommendations for action by the appropriate agencies.

The working group met at Arnprior on May 16 and 18 and this Report contains an outline of the discussions, the conclusions reached, and the recommendations made to Canada EMO for its action with other government agencies.

There is available in Canada a vast reservoir of equipment, technical professional and operating expertise in the Amateur Experimental Service which can be used either as first-line communications or as a back-up system of an extent which can only be realized by those who are familiar with it.

The sophistication of some of the Amateur Experimental Service activities is equivalent to, and in some cases, surpasses commercial development. Electronic and communications companies have for decades been indebted to the individual amateur experimenter for many of their products and techniques. In Ottawa, for example, a local amateur controls an amateur communications satellite, (OSCAR VI) which has been a tremendous success in national, international and intercontinental transmissions. He is currently, along with a handful of other amateurs, assembling the electronic heart of another satellite to be launched late this year.

A plan is currently being drafted seeking recognition on a national basis of the capability of the Amateur Experimental Service to render assistance to government at all levels when they are faced with crises which require communications. The plan, which is being developed by interested amateurs, will be presented to Canada EMO for its consideration and action.

The role of the Amateur Experimental Radio Service in Emergency Communications

Summary of the Discussions

The method of discussing the problems posed by the various items was to have a short presentation on each one of them, by one of the participants who was familiar with the subject. After the presentations the meeting broke up into separate groups, each charged with considering the various factors involved and each bringing back to a central discussion group a separate recommendation which was then subject to further review and discussion by the whole group.

Item 1

"The establishment of the necessary machinery for liaison between a national crisis management centre or some federal authority and the Canadian Amateur Radio Federations Inc. executive with the objective of giving amateurs engaged in international or national emergency communications, such as in the Managua earthquake, a focal point for delivering and accepting emergency traffic for the federal government." (See Recommendation No. 1)

The discussion was introduced by an Ottawa operator who, as a result of his experience in the Managua disaster, proposed that whatever federal agency could assure delivery of incoming emergency traffic should have its name and telephone numbers made known to amateur operators.

In the handling of international disaster traffic, it could be the Department of External Affairs, while in national, domestic disasters, it would be Canada EMO or, if one is set up, a national crisis management centre.

Other questions which arose and which should be answered in the course of the work involved if Recommendation No. 1 is carried out by Canada EMO are:

(*a*) What methods are to be used to disseminate such information to Canadian amateurs?

(*b*) To what extent should the information be disseminated? Should it be available to all amateurs or just to executives of amateur radio organizations?

(*c*) Would the cognizant government agency be willing to recognize the individual amateur as a point of contact or just the organizations?

(*d*) Would not provincial emergency agencies be able to provide the link with the cognizant federal agency?

(*e*) In the event of an international disaster or a domestic emergency in which the amateur service is involved in either a primary or a supplementary communications role would it be possible to have amateur equipment installed in the quarters of the federal agency functioning as a crisis centre or those departments heavily involved? This equipment could be transmitters and receivers, monitoring receivers only, or a direct temporary line link or phone patch to an amateur station.

Item 2

"Development of similar measures (as in Item I) for liaison between amateurs and;

(*a*) provincial societies, provincial emergency agencies and their communications officers;

(*b*) the same for municipal level emergency agencies". (See Recommendations Nos. 2(a), (b) and (c)).

2(*a*) The British Columbia Civil Defence (C.D.) communications system was outlined as a start to the discussion. The method of amateur liaison in B.C. is simple. The amateur portion of the emergency communications is divided into six nets whose net controllers have contact with the Zone C.D. co-ordinators. There is a "rear link" from Zones to C.D. headquarters at Victoria, where there is a 24-hour duty officer on a paging system. It was strongly urged that the present rules concerning the Amateur Service in wartime should be reviewed and amended to permit use of authorized, previously designated amateur stations in wartime.

(The procedures for "shut-down" applying to amateur radio stations in wartime are in the emergency legislation which can be activated if the War Measures Act is invoked.

In Quebec, the provincial emergency organization Protection Civile, (Civil Defence) does not rely on nor incorporate amateur stations in their communications system. The formal emergency communications system has served the province well. It appears that amateurs could be utilized but a lack of co-ordination of amateur efforts to date, due to divided opinion as to the organization or persons to represent amateur radio to Protection Civile has resulted in little effective liaison.

2(*b*) On the municipal level the contact for emergency traffic for local government between amateurs and the local government should be through the local emergency organization, according to a representative from Saskatchewan. On the whole, he said, amateurs are ill-informed as to how to react to an emergency in an organized fashion. He pointed out that Saskatchewan has integrated the Amateur Service into its emergency system and that those in the system are trained and regularly exercised. Saskatchewan has held top honours in the Amateur Radio Emergency Corps competitions (sponsored by the American Radio

Relay League) but even after 37 years of existence there is little activity in the rest of the country, he said.

The core of emergency communications is commercial or utility communications but in a disaster these may quickly become overloaded, with even a ten-fold rise in traffic. It is necessary therefore to have a back-up system. For example, hospital line communications would quickly become jammed and they therefore require a back-up communication system.

In Saskatchewan EMO uses a provincial network of amateur equipment and operation of 3780 KHz. Emergency agencies also operate on 27.80 for emergency work utilizing amateur and GRS personnel trained as EMO operators. In Saskatoon the hospitals also use VHF links between three hospitals and mobile units, utilizing amateurs integrated into the EMO system.

There is complete interlocking of all communications systems. All EMO owned emergency systems are manned by EMO personnel recruited from both the Amateur Service and the General Radio Service (GRS).

Contact between Amateurs and the Saskatoon municipal government is through the communications chief of the Saskatoon Emergency Measures Organization, who directs all public utility, amateur and GRS participation.

Item 3

"Explore the possibility of designating exclusive emergency frequencies in the Amateur Service bands either pre-assigned or to cover a frequency being used for emergency traffic and the methods of designation." (See Conclusion No. 1)

This item generated a great deal of discussion and several attempts were made to come up with a suitable concept and procedure for designating emergency frequencies for amateur operation but so many questions were raised which appeared to be obstacles to a simple and easy solution that it was concluded that present practices have worked out satisfactorily and that no changes or revisions to the radio regulations are necessary or desirable.

Item 4

"The use of Amateur VHF and UHF repeaters in wartime. (See Recommendation No. 6)

In introducing this subject, it was noted that the emergency use of amateur repeater facilities, which were practically non-existent ten years ago, was not provided for in the present wartime allocation of amateur frequencies to other uses and that it was mention of this particular situation at the Canada EMO Emergency Communications Planning Officers' Conference in February, which instigated the present working group. It was reiterated that local emergency agency co-ordinators in Ontario would like to include the use of local amateur operators in their emergency communications plans but the present wartime frequency assignments do not permit them to do so. If use is to be made of this extremely valuable communication resource, then changes will have to be made to these assignments.

In B.C., emergency EMO tactical call signs have been assigned to certain mobile and fixed stations on repeaters. The amateur operators have Restricted Radio Telephone Operators Certificates.

It was suggested that provincial radio societies might provide lists of repeaters to provincial co-ordinators and keep them up to date. Repeater councils in various areas, including joint Canadian/U.S. councils in border areas, are a source of such information.

Although in commercial use repeaters are regarded as "frequency wasters" by DOC*, the amateur repeaters provide a tremendous flexibility and survival factor not found in commercial repeaters. In any event there is still a large amount of unused VHF and UHF amateur frequency spectrum available in Canada for repeaters.

Item 5

"Discussion and recommendation for revision of wartime Amateur VHF and UHF frequency allocation to permit use of repeaters, including channels to be added and consideration of split channel (30 KHz spacing) in allocations." (See Recommendation No. 6)

Item 6

"A preview of the repeater guidelines and the regulations applicable to amateur radio participation in peacetime emergency communications and the effect of both of these on the use of amateur repeaters in peacetime emergency communications." (See Conclusion No. 2)

Tracing the history of the "repeater guidelines" he stated that as it now stands, there is no regulation prohibiting the operation of repeaters but there is no authorization to use them either. The guidelines were drafted by amateurs for the DOC and in October 1972, the DOC asked the Canadian Amateur Radio Federation Inc. to contact the provincial societies as to the suitability of the "guidelines". For the protection of the amateur and to permit uniform rulings by the DOC field personnel, the DOC wished to put them in the form of regulations.

The response to the Federation canvass was pretty well unanimous in declaring that the guidelines are suitable as they are. Some minor wording changes were recommended by two or three clubs, changing negative statements to the more flexible, positive approach. The regulations pertaining to the Amateur Service in peacetime emergencies mentions "recognized relief agencies" and this includes the official emergency agency at the federal, provincial or local level, but amateur stations engaged in emergency

*DOC Department of Communications.

communications must adhere to those regulations governing emergency traffic.

Individual amateurs engaging in emergency communications must notify DOC of such activities, but for those amateurs who do so on behalf of, or as part of, an approved civil emergency communications plan, the official emergency agency involved should notify DOC of the amateurs' participation. This includes repeater operations.

In the interest of highway safety, The Canadian Amateur Radio Federation Inc., has asked DOC to wave the necessity for logging by mobile stations. The original rules applied to logging never envisaged the mobile set nor the extent of its use today.

The rule is anachronistic and may well be relaxed. Logging for base stations is however, protection against unfounded charges of interference.

Unco-ordinated use of auto-repeater channels is causing some problems and could cause more, but the formation of repeater councils on a regional, and in some cases on a local across-the-border basis has solved many of the problems. Repeater advisory committees on the national, provincial and local levels would be an even better approach.* A national repeater frequency plan is being formulated by interested parties and if followed, could work with 4 sets of crystals which would ensure coast-to-coast coverage without overlapping of repeater coverage areas.

Item 7

"The problem of power line interference to the amateur service. The necessity for a consistent DOC policy on a national basis, regarding the handling of amateur complaints." (See Conclusion No. 3)

After a talk on this topic, there was an interesting discussion on the "anti-galloping" device which recently appeared on high tension transmission lines in the Ottawa area. This apparently produced a corona-like interference across a wide spectrum including the Amateur bands, and DOC, Ontario Hydro and local amateurs co-operated to pin point both the source of the interference and to remove it.

About half of the time which DOC spends on interference tracing is spent on checking power line interference. It would appear that with more liaison between DOC and power companies, and some training courses, power companies could do much to correct such problems themselves.

While power line interference (mainly corona) will probably rise as demands and voltages are raised, possibly new developments may help to eliminate the problem.

Unfortunately, the main problem, that of corona, increases or appears with bad weather and many emergencies are generated by weather conditions so that when most needed, radio communication may encounter such interference.

Amateurs are advised to collect as much evidence as possible and present it to DOC and the power companies if they encounter this interference.

Item 8

"The Use of GRS* Equipment and Frequencies."

It was noted that a 1968 agreement between Canada EMO and DOT authorizes the use of 27.80 MHz by civil emergency organizations as a frequency for their emergency operations. Equipment must be type-approved GRS equipment and operated uner an emergency agency call and license, not on a GRS call or permit. In utilizing GRS operators and their equipment, the emergency agency must ensure, before the equipment is used on 27.80 MHz or crystals for this frequency are issued to the GRS operator, that the GRS equipment is type-approved. An advantage of this frequency is that it is free from interference because it is not assigned to the Citizens' Radio (CB) Service in the United States. The Saskatoon Emergency Measure Organization supplies crystals for this frequency for GRS equipment manned by GRS volunteers. This frequency is monitored and taped by the Regina police to ensure that no misuse occurs and in order to have immediate notice of emergencies. All transmissions are recorded which assists in the detection of any violations.

Item 9

"The relaxation of standards for the use of GRS equipment in the emergency frequency 27.80 MHz for the base stations." (See recommendation No. 7 and Conclusion No. 5)

One problem, is that while much of the GRS mobile equipment can meet the specifications, there are few base stations which can.

Before buying or using GRS equipment emergency organizations can check for type approval by consulting the "Radio Equipment List, 1973 (which is available from Information Canada) and with the DOC Regional Office. If emergency planners wish to use a certain GRS equipment they should consult with their local DOC Field Office as to its acceptability.

The question was also raised as to whether or not type-approved equipment released from a different service as surplus could be used on EMO frequencies. The DOC representative said that if the equipment was "listed" it could be transferred from one use to another, for example from fixed land station telephone service to land fixed station EMO service but not to marine service.

Item 10

"The use of amateur (non-type approved) equipment on EMO frequencies in peacetime and wartime." (See Conclusion No. 4)

*The Amateur Radio League of Alberta, for example, has an advisory committee on repeater activities and provides equipment, technical and financial assistance to repeater groups which follow the committee's guidelines for operation.

*GRS General Radio Service.

As noted under Item 9 it was pointed out that type-approved equipment for EMO use on VHF frequencies is too expensive for one operator's budget and he wanted to use type-approved surplus equipment rather than be concerned about using amateur equipment on this frequency.

Another operator, asked if amateur equipment could be used on 148.65 MHz for emergency communications. According to DOC in peacetime, amateur equipment could only be used on EMO frequencies if it is type-approved but it is not feasible to obtain type-approval on amateur equipment as it serves no profitable purpose insofar as the manufacturers are concerned and adds a cost factor which they would not consider worth the effort.

As to the wartime use by emergency agencies of amateur equipment and facilities on the amateur frequencies re-allocated to EMO, there is no regulation or requirement governing the equipment used.

Item 11

(Deleted by editor)

Item 12

"The use of amateur radio in recent emergencies."

A Quebec operator, described the functioning of the emergency networks used by Quebec's Protection Civile during the spring flooding of the St. Lawrence in the Montreal area. Amateur radio does not form a part of these networks.

Through the use of aircraft and car mobile radio units reporting on ice conditions and precipitation, reports were sent to Quebec City and the authorities there were able to evalute and consolidate this information and feed back warnings to the agencies and municipalities which were threatened.

The idea of teletype was considered but proved to be too costly and the radio nets, including the metropolitan Montreal system of repeaters, tied in some 65 municipalities. Information fed from the field unit to Quebec was in the hands of the affected municipalities within hours. This information system permitted them to alert and evacuate people from the flooded areas.

Recommendations and Conclusions

The various factors to be considered in evaluating the role of the Amateur Experimental Service in emergency communications and the form which that role could take were discussed in detail under the topic headings outlined previously the following recommendations and conclusions were arrived at:

1. IT IS RECOMMENDED THAT:

(*a*) The Canada Emergency Measures Organization discuss with federal agencies such as the Departments of National Defence and External Affairs or with any federal crisis management centre which may be established, the matter of determining and making known a continually-manned point of contact to which amateur radio operators engaged in emergency communications related to a national or international disaster could deliver official emergency traffic, and from which they could accept such traffic.

(*b*) The Canadian Amateur Radio Federation Inc. make known to the Canada Emergency Measures Organization the amateur organizations or individuals which the federal agency or agencies in 1(a) should contact if the agency or agencies wish to make use of the Amateur Experimental Service for passing emergency traffic.

2. IT IS RECOMMENDED THAT:

(*a*) At the provincial level, liaison concerning emergency communications planning between government and the Amateur Experimental Service should be carried out between the communications officers of the provincial emergency organizations and the provincial amateur radio society.

(*b*) The point of contact between provincial government and any provincial amateur organization or individual amateur engaged in emergency communications should be the provincial emergency organization which has a 24 hour, daily response capability for emergency traffic addressed to or from its provincial government. Regional Directors of Canada EMO should be informed of these liaison arrangements.

(*c*) The liaison between local government and Amateur Experimental Service licensees should be as for 2(a) and (b) above, with the municipal, county or similar emergency organizations acting as the point of contact for local amateur radio clubs and repeater owners where they exist; or in their absence, for individual local amateurs committed to emergency communications work and local net control station operators.

3. IT IS RECOMMENDED THAT:

The telephone numbers and addresses of provincial and local emergency organization duty officers and emergency operating centres be made known to individual amateurs through the bulletins published by provincial societies and local clubs and through "The Canadian Amateur".

4. IT IS RECOMMENDED THAT:

The provincial societies and local clubs, respectively, or in the absence of the latter, interested and active individual amateurs provide the provincial and local emergency coordinators or directors with a list of amateur licensees available for emergency work, including their addresses and

telephone numbers, their capability, including repeaters and their coverage; and properly maintain these lists.

5. IT IS RECOMMENDED THAT:

As a principle, where there is not already utilization of the amateurs by the provincial emergency agencies that they not direct the amateurs how to organize themselves in support of emergency organizations but instead approach the appropriate amateur organization, on the provincial or local level, making known their communications requirements and asking its assistance and suggesting that the amateurs organize themselves, using active, emergency-oriented amateur operators to meet the requirements of the emergency agencies. These communications requirements should include the amateur tie-in with municipal emergency agencies.

6. IT IS RECOMMENDED THAT:

(*a*) Amateur auto-repeater facilities be considered for inclusion in emergency measures communications planning.

(*b*) The provincial amateur radio societies provide all detailed information on repeaters in their provinces to the provincial emergency co-ordinators.

(*c*) In view of the potential importance of the amateur repeater facilities as a back-up system in an emergency, the frequencies in the 144-148 MHz band allocated for emergency agency use in wartime be reviewed and changed in order to accommodate the use of amateur repeaters now in use or likely to be established.

7. IT IS RECOMMENDED THAT:

The standards for the use of GRS equipment for use on the emergency agency frequencies 27.80 MHz be relaxed for mobile stations and base stations.

8. IT IS RECOMMENDED THAT:

Third party traffic rules for Amateurs Experimental Service be clarified by DOC.

9. IT IS RECOMMENDED THAT:

In order to promote and maintain the interest of amateur radio operators in emergency agency communications, provincial and local co-ordinators should be asked to speak to key radio club meetings and provincial radio society conventions in order to acquaint amateur operators with the communications requirement for emergency operations.

10. IT IS RECOMMENDED THAT:

Operators in the Amateurs Experimental Services who use their facilities to assist emergency agencies should be encouraged to use and supplied with a message format similar to that of the emergency measures organizations and that it be distinctly labelled as an "Amateur Radio Message Form".

Conclusions

1. After thorough discussion of a number of draft recommendations, it was concluded that the designation of exclusive emergency frequencies in the amateur bands was not practical and that to date the "self-policing" of frequencies being used for emergency communications and the existence of the regulation against "wilful interference" both here and in the United States, was adequate protection for emergency operations.
2. After discussion on the radio regulations and the repeater guidelines as they affect the case of amateur repeaters being used in peacetime emergency communications, it was concluded that neither the present radio regulations nor the present guidelines for repeater operations present any impediment to such operations and hence no changes are necessary.
3. In cases of electrical power line interference to Amateur Experimental Stations, the amateur should obtain as much fully-documented technical evidence as possible and present it to the DOC and the electric power company.
4. DOC will not permit the use of non-type-approved amateur equipment on EMO frequencies and it is not practical for manufacturers or users to seek type approval on amateur equipment.
5. Surplus equipment from other services made available to emergency authorities can be put into service on emergency frequencies if it meets with the technical requirements of the DOC. Emergency authorities are advised to contact the DOC Field Office in the event that they have the opportunity of obtaining surplus equipment. ▲

THE PUBLIC *(Continued from inside back cover)*

And why did he go to bed instead of getting right to the scene? How did he know the experts from the rail company and the chemical company knew what they were doing? He didn't even offer to air-evacuate the whole area. He didn't call in the army. He didn't call it a disaster area and that means no federal grants.

And his wife didn't like the movie.

For the next several days he watches his name and face drift from one front page to the next, and nowhere along the continuing line of type does anybody have anything good to say about him or the services he offers. He still wonders why he was called in the first place. And now it really bothers him that he doesn't know who called.

This then is the public relations disaster. It does not endanger human life — unless the fellow happens to be suicidal.

There are two ways to live with this problem.

Method one: Listen to your mother when she tells you to take up dentistry.

Method two: A thick skin and a short memory. ▲

CIVIL EMERGENCY PLANNING RESUME – 1973

by Canada EMO Public Information Planning Division

The Emergency Measures Organization was established within the Privy Council Office on June 1, 1957, for the purpose of planning for the provision of government leadership, services and resource management in an emergency, and to ensure a Canadian contribution to NATO civil emergency planning.

On May 28, 1959, a Canadian federal government order placed the Emergency Measures Organization under the Prime Minister and defined the civil defence responsibilities of National Defence, National Health and Welfare and Justice Departments. Under this order, the Emergency Measures Organization assumed, in addition to its government and resource management planning, the responsibilities of the Civil Defence Branch which, in turn, ceased to exist.

Order-in-Council P.C. 1963-993 of June 27, 1963, transferred responsibility for the Emergency Measures Organization, to the Minister of Defence Production. Two years later Order-in-Council P.C. 1965-1041 approved the Civil Emergency Measures Planning Order which in addition to defining the responsibilities of various federal departments and agencies, placed the organization under the Minister of Industry. By Government directive of 1966 the Minister of Industry was delegated responsibility for making coordinated plans for peacetime emergencies, and for providing and coordinating the initial federal response to any peacetime situation, whether the federal government was involved directly or called upon by provinces or municipalities for assistance.

The 1965 Order-in-Council was amended in 1968 by P.C. Orders 1968-1302 and 1968-1508 which transferred responsibility for civil emergency planning from the Minister of Industry to the Minister of National Defence.

Under the Minister of National Defence, the Canada Emergency Measures Organization is the federal coordinating agency for civil emergency planning.

The objective of the Civil Emergency Measures Program is to develop plans and activities which will enable the nation to survive and recover from war emergencies and peacetime disasters. The development of these plans can be summarized under five main headings:

- *Emergency Measures (Peace)* — The study and analysis of the effect of peacetime emergencies on the social, political and economic structures of Canada; the devising of measures to avert or mitigate the effects of peacetime emergencies and the promulgation of advice and guidance on these matters; the development and implementation of emergency measures at the federal level where these are not the statutory responsibility of other departments or agencies; and the coordination of federal assistance either requested by provincial governments or in support of a federal department having statutory responsibility.
- *Emergency Measures (War)* — The study and analysis of the effects and implications of war upon the social, political and economic structure of Canada; the devising of plans and preparations to counter the effects of war; the negotiation with federal departments and agencies and with provincial authorities for their participation in such plans and preparations; and the subsequent coordination of the development of resulting emergency measures. Provides for the general administration and management of the program.
- *Financial Support* — The provision for contributions to provinces to defray part of the cost of approved civil emergency measures projects undertaken by provinces and municipalities in accordance with terms and conditions established each year with Treasury Board; to monitor, analyse and evaluate the progress of the federal, provincial and municipal civil emergency measures program.
- *Emergency Programs* — The support to, and implementation of, plans to provide for and to test emergency preparations for war and peace to meet federal, provincial/municipal requirements.
- *International* — With the concurrence of the Secretary of State for External Affairs the primary responsibility for general liaison and development of compatable measures with other nations for war emergencies by participation in NATO civil defence meetings and United States/Canada planning arrangements.

Federal Departments

The Civil Emergency Measures Planning Order of 1965 also defines the civil emergency powers, duties and functions of the ministers of federal departments and agencies having immediate responsibilities in the event of a war emergency. Included in this category are the Departments of Agriculture, Supplies and Services, External Affairs, Finance, Fisheries, Justice, Labour, Manpower and Immigration, National Defence, National Health and Welfare, Post Office, Public Works, Solicitor General, Transport; and the Bank of Canada, the Canadian Broadcasting Corporation, the Central Mortgage and Housing Corporation and the Royal Canadian Mounted Police. Under the Public Service Rearrangement and Transfer of Duties Act some of these powers, duties and functions are transferred to other ministers, notably Environment and Communications.

Organization

The general federal organization for civil emergency planning consists of a Cabinet Committee on External Policy and Defence; the Canada Emergency Measures Organization comprised of the National Coordinator, Civil Emergency Measures and Canada EMO headquarters staff; Regional Directors in each province and

the Canadian Emergency Measures College at Arnprior, Ontario; federal government departmental planning staffs; federal government organizations in the provinces.

The headquarters of the Canada Emergency Measures Organization is located in Ottawa. The National Coordinator reports to government through the Minister of National Defence. A regional office is located in the capital city of each province and for planning purposes each region corresponds to its respective provincial boundaries. Coordination of federal planning responsibility for the Yukon and the Northwest Territories is carried out from the regional office in Edmonton, Alberta.

Canada EMO has been organized into three major functional branches: the Programs and Operations Branch, the Plans Branch and the National Training, Development and Exercises Branch.

Within the Programs and Operations Branch are divisions responsible for national program development, national program evaluation, continuity of government, public fallout protection, emergency public information planning and road transport planning.

The Plans Branch is comprised of divisions responsible for economic planning, operational concepts and procedures, physical protection planning, radiological biological and chemical defence planning, organization system planning, international civil emergency planning and emergency incident investigation.

The National Training, Development and Exercises Branch is responsible for training development, national exercise planning, supervision of the Canadian Emergency Measures College and the provision of coordinated leadership training assistance to all levels of government and related civilian agencies.

Federal Regional Directors in Provinces

Regional Directors of Canada Emergency Measures Organization in each province (region) have been assigned responsibility for representing Canada EMO in the region for all civil emergency planning purposes and the establishment and maintenance of effective liaison with the provincial emergency plans, including those of local organizations, and in major peacetime disasters to assist in the Canada EMO review of requests for financial aid from the province or municipalities within the region.

Provincial Government Civil Emergency Planning Responsibilities

Provincial governments will make such preparations as are required to enable them to execute the following civil emergency powers, duties and functions in war:

- the development of policies and a program to ensure the continuity of provincial government in an emergency.
- the preservation of law and order, including control of traffic;
- the organization and control of emergency welfare services including emergency clothing, lodging, feeding, registration and enquiry, and personal services;
- the organization and control of health and medical services, including hospitals and public health measures;
- maintenance and repair of roads and road bridges;
- coordination of municipal and other services for the maintenance and repair of water and sewage systems;
- organization and operation of firefighting services;
- maintenance and repair of electrical and gas utilities;
- organization and operation of radiological defence services;
- communications within the province;
- coordination and, as may be required, direction of emergency operations of municipal governments;
- the conduct of survival operations with the assistance of the Canadian Forces, if required and available;
- in accordance with agreements reached with the federal departments and agencies concerned control of accommodation, control of engineering and construction resources, provision of emergency housing and arrangements for roads and road bridges; control of road transport resources; maintenance of agriculture production and the control of fisheries.

In addition, provincial governments in peacetime will be responsible for assigning to each municipal government its operational roles; providing assistance and guidance to municipal governments in respect of the preparation of municipal civil emergency plans for the continued operations of municipal government, survival of the public and the operation of municipal emergency services, including the organization and operation of such special emergency services as may be required such as rescue, warden, emergency communications, emergency public information, radiological defence and emergency transportation; assistance and guidance to municipal governments in the training and exercising of regular municipal employees and volunteers as emergency workers; making such preparations or arrangements as are required to provide for the protection of the population of those parts of the province which are not administered by an incorporated municipal government.

Historical Summary

The first organization formed in 1938 for the defence of Canada's civilian population, Air Raid Precautions, was responsible only to one department of the federal Government. Since then, civil defence provisions have changed with the times. By the 1960's the Canada Emergency Measures Organization had been

established to coordinate the machinery of government departments at all levels in adapting to the demands of war or of peacetime disaster.

Air Raid Precautions. As early as 1936 the Government and armed forces discussed plans for civil defence. In 1938 the Air Raid Precautions Committee was formed, under chairmanship of the Deputy Minister of the Department of Pensions and National Health and as a responsibility of that Department.

Basically, he ARP program was designed to organize a warning system, to set up and enforce lighting restrictions at plants and other vulnerable areas, to prepare a system of protection from high explosive, incendiary and gas bombs and to establish an organization for the treatment of casualties. Rescue parties were to be organized, plans were laid for the maintenance of essential public services during an emergency, dispersal plans for large centres of population were prepared and machinery was organized to inform the public on ARP matters. The central ARP Committee recommended that handbooks should be prepared for the use of local authorities and volunteers and that the Department of Pensions and National Health, working with municipalities through the provincial governments, should be made responsible for air-raid precautions. The federal Government was to bear the expense of producing gas masks, handbooks and decontamination materials, and the cost of training instructors.

Up to the end of 1938, ARP activity was limited to behind-the-scenes planning. With the onset of war in 1939, provincial and municipal authorities were brought in and by the end of 1941 it was estimated that of the 2,500,000 people living in areas considered vulnerable to enemy attack, approximately 1 in 27 was an ARP worker and 1 in 102 an air-raid warden. ARP organizations were formed in all except the Prairie Provinces, providing specialized training and making first-aid and firefighting equipment available.

The ARP organization began to disband late in 1943 and by late 1945 the movement had virtually terminated, except in B.C. where Japanese balloon bombs were still considered a menace. In the six years of its existence, ARP had organized approximately 775 communities and had reached a strength of about 280,000 people. Eight cities and some provinces had full-time directors but most of the tasks were performed by unpaid volunteers.

Civil Defence. In November 1948, a national civil defence coordinator was appointed to carry out basic planning activities and in August 1950 the structure of a new civilian defence organization, to be known as Civil Defence, was authorized at a meeting between the federal minister of national defence and ministerial delegates from the provinces. An advisory committee was organized and the federal minister was designated chairman. The general aims of Civil Defence were basically the same as those of its ARP predecessor, centering on local organizations, with the role of the federal Government largely that of a guiding, directing and coordinating agency. The federal Government assumed responsibility for the provision of an advance warning system, in co-operation with the provincial and local authorities. It also agreed to supply warning devices to the municipalities that formed part of civil defence target areas. The central Government also entered into financial agreement with the provinces concerning standardization of hose couplings, provision of radiological and technical instruments, training equipment, medical supplies, training aids and manuals. It agreed to provide special courses for civil defence matters, a civil defence school, and to maintain liaison with the United States and other foreign civil defence organizations.

In 1951 the federal organization came under the authority of the Minister of National Health and Welfare. It was directed by a federal civil-defence coordinator, Major-General F. F. Worthington*, acting in an advisory capacity to the minister. The staff of the federal Civil Defence office was sub-divided to set up sections responsible for operations and training, administration and supply, health and welfare planning, communications and transportation, research and development, public information and organization of members of the federal civil service.

In order to train skilled instructors in all aspects of civil defence activities, the federal authority set up the Canadian Civil Defence College at Arnprior, Ont., (now Canadian Emergency Measures College) in January 1954. Previous to this, training had been carried out in temporary quarters near Ottawa. The facilities of the Joint Atomic, Biological and Chemical Warfare School at Camp Borden were also utilized. Candidates from provincial and local civil defence organizations were provided with advance instruction in tactics, administration, firefighting, rescue, radiation monitoring, health and welfare training, warden services and information services. The college was also used for tactical studies by provincial and municipal civil defence officials, and as the federal control centre in nation-wide civil defence exercises.

At the beginning of the program in 1951, emphasis was placed on organizing target areas for self-defence. With the development of the H-bomb however, an increasing amount of attention was directed to setting up strong organizations in communities surrounding target areas. This development was in line with a civil defence policy advocating evacuation of target areas rather than a policy of taking shelter during attack.

In 1957 the Emergency Measures Organization was established as an organization of the Privy Council Office, with general responsibility to the development of programs directed toward the survival of Canada as a nation. At that time matters more directly related to the survival of the population were still the concern of the federal Civil Defence headquarters. Subsequent rearrangement of civil emergency planning responsibilities within the federal Government and agreement resulting from the 1959 and 1965 Dominion-Provincial Conferences on civil defence arrangements led to the Civil Emergency Planning Order of June 1965. ▲

*Deceased.

THE PUBLIC RELATIONS DISASTER AND HOW TO LIVE WITH IT

A Light Look By Dave Brown
Ottawa Journal

An Emergency Measures Organization field officer is notified of an accident, or a near accident, checks it out and finds there is no immediate danger and leaves it to the parties involved to sort out their problems. As far as he is concerned he has done his job. That opinion is shared by his superiors. There is, however, a very good chance that this man is flirting with another problem that becomes a bit of a personal disaster.

This is the public relations disaster.

Traces of it can be found in EMO headquarters reports across Canada. It is from these reports that the facts for this story are drawn. Names, dates and places aren't important because they happen everywhere. It's simply a matter of throwing many reported experiences of this nature into one story.

Then try to keep a straight face.

For our story, let's make the problem a gas scare. Chlorine gas, for example, stirs such memories and fears that only that word, lettered on the side of a truck or railway car, causes worry. With industry using much of this product, it's a rare freight train that doesn't include a tank car of chlorine gas. If one of these trains is derailed, or involved in any kind of accident, that car is going to cause problems. Even if it's undamaged the problem is there, and it grows accordingly if it is directly involved or damaged.

So we have a derailment, plumb centre between Anywhere, a small and mainly abandoned mining town, and Noplace, a hippie commune. There are no injuries although some 20 cars are off the track and have ripped up some half mile of roadbed. One of the cars lying on its side on the right-of-way is a chlorine tank carrier and it has sprung a leak, small but worthy of caution.

The nearest community with a resident EMO co-ordinator is Someplace, about 100 miles away. It's 9.30 p.m. and that co-ordinator has not yet been notified but he has already made his first mistake.

He has chosen this particular night to take his wife to a movie.

Our man first hears of the incident from the babysitter. He immediately calls police and is assured engineers and work crews are at the wreck site, have the situation under control and there is no immediate danger. The gas leak is small and escaping gas dissipates fast in the uninhabited surroundings. Engineers say they can close the leak.

After checking maps of the area and planning a trip to the wreck site first thing in the morning, our man goes to bed. He wonders who called the babysitter but it doesn't interfere with his sleep.

Next morning he discovers the police report of the situation was accurate and there is no danger. It's a matter of clearing the mess and repairing the track and crews skilled in that field are at work. He goes home unsuspecting.

Here's what he missed.

The few inhabitants of Anywhere have been looking for a chance to put their town back on the map, or at least on the front page of the Someplace newspaper. There is also some fear about that damned gas breaking loose and descending on them while they sleep. They have a provincial politician living in Someplace and it's about time he paid some attention to them.

The inhabitants of Noplace are ridden by many fears too. If police move into the area somebody may notice there's no corn on those big plants in the cornfield. Besides, they dropped out and moved to Noplace to get away from pollution, noise and police, and there's entirely too much of all that around right now. Somebody should do something. One of their number is a drop-out lawyer and here's a chance to see if he still knows how to push and make it hurt.

And back in the city room of the Someplace newspaper a man is trying to fill a large hole in the front page when the telephone rings. The politician has an official statement ready about how he will jump to the defence of Anywhere and Noplace. Heads will roll.

The front page problem is solved. In fact it's solved for as long as that particular section of track remains blocked, and that could be several days. News space remains open to many persons who for any number of reasons may want to build up some Brownie points.

The politician has never fared too well at the pool in Anywhere, and here's his chance to show he cares.

The hippie lawyer may want to prove to himself he still has the touch.

A tourist outfitter wants the world to know about his area, and refers to the dangers to the great fishing and hunting.

A reporter from the Someplace newspaper needs some bylined front page stories for his scrapbook, for he has plans of moving to a bigger paper and a higher paying job.

All that's needed now is a target. The rail and chemical companies are out because they are handling the whole affair through their public relations departments and have too many ready answers. Diplomatically they refuse to use their public relations skills to take a shot at anybody else, but at the same time they don't offer their services to targets outside their companies.

Now guess who is running around with bullseyes, front and back.

The EMO man wasn't there when he was called. Isn't he supposed to be ready and waiting for a disaster?

(Continued on page 13) **THE PUBLIC**

EMO X

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